



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,423	03/04/2002	Toshikazu Ohnishi	Q68580	1370
23373	7590	11/16/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			ALI, MOHAMMAD M	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/086,423

**Applicant(s)**

OHNISHI ET AL.

**Examiner**

Mohammad Ali

**Art Unit**

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/26/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1=2, 4-6 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 3 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### FINAL REJECTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, Masao. Yamazaki, Masao discloses a coaxial flow of liquids comprising a supply of a sample liquid through tube 23 having a tip end (nozzle end) of tube 23) of which is disposed at a center portion of flow of sheath liquid supplied through the sheath tube 24. Yamazaki, Masao discloses the invention substantially as claimed as stated above. However, Yamazaki, Masao does not disclose a valve connected to tube 23 to control the flow of fluid therethrough. The Examiner considers obviously there should be some sort of controlling arrangement of flowing fluids/liquid on both the tube 23 and 24 because no fluid is allowed to flow continuously without any control. See Fig.3.

Claims 3 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 06/16/04 have been fully considered but they are not persuasive. The Applicant argued, "Yamazaki fails to show mixture of the sample suspension 25 and the sheath liquid 26, or a tip end of the nozzle being positioned at a center portion of flow of fluid. In particular, Yamazaki provides no disclosure that the end of tube 23 is disposed at a center of flow of the sheath liquid 26. Further, Yamazaki's Abstract states that the sample suspension 25 is wrapped with the sheath liquid 26. This wrapping of the sample suspension 25 would suggest precluding the one fluid one fluid being introduced at a center portion of flow of the second fluid. For example, in Yamazaki, the sample suspension 25 is not introduced at a center portion of flow of the sheath liquid 26 since the sheath liquid 26 wraps the suspension liquid 25. These arguments are equally applicable to claims 4 and 5. Accordingly, the claims are allowable at least for these reasons." The Examiner disagrees. There are two different fluid supplies from tube 23 and 24 of Yamazaki. It is explicitly evident that tip of the tube 23 is centered in the flow chamber 21. Both the fluids are supplied to the flow chamber 21 and they are flowing towards jetted nozzle 22. The fluids are not stagnant and under pressure. It is the nature of a fluid to spread in all direction when it enters a container. Therefore, the fluids will move in all possible direction including the direction towards the jetted nozzle 22 and mix each other invariably at the nozzle orifice while jetting out the fluids into drops. And finally sorting of the sample particle and liquid. Unless there is any mixing, question of sorting of the sample and liquid does not arise. Moreover, the claim 1 does not disclose mixing of fluid except the preamble, which is not a part of the invention. Therefore, the rejections are proper. In reply to the last final office action of

07/26/04, The Applicant further argued "In particular Yamazaki provides no disclosure that end of tube 23 is disposed at a center of flow of the sheath liquid 26. Further, Yamazaki's Abstract states that the sample suspension 25 is 'wrapped' with the sheath liquid 26. This wrapping of the sample suspension 25 would suggest precluding the one fluid being introduced at a center portion of flow of the second fluid. For example, in Yamazaki, the sample suspension 25 is not introduced at a center portion of flow of the sheath liquid 26 since the sheath liquid 26 'wraps' the suspension liquid 25. These arguments are equally applicable to claims 4 and 5. Accordingly, the claims are allowable at least for these reasons." The Examiner again disagrees. Fig. 3 of Yamazaki clearly discloses a coaxial flow 27. It means that more than one fluid is flowing through the nozzle 22. It is also clear that the nozzle 22 is at the bottom center of flow chamber 21 and the tip of the tube 23 is right on top of nozzle 22. Therefore, the tip of the tube 23 is also located at the center position of the flow chamber 21. Thus, Yamazaki clearly shows pictorially that the tip is disposed at the center of flow of sheath liquid 26. Both the sample suspension 25 and the sheath liquid reach the nozzle where they are finally mixed together. Therefore, the rejection is proper.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the


Art Unit: 3744


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is 703-308-5032. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Esquivel Denise can be reached on 703-308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mohammad M. Ali  
November 9, 2004

  
DENISE L. ESQUIVEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700